APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,123	01/09/2004	James R. Bailey	2003-0270.02	8456

21972   7590   08/20/2007
LEXMARK INTERNATIONAL, INC.
INTELLECTUAL PROPERTY LAW DEPARTMENT
740 WEST NEW CIRCLE ROAD
BLDG. 082-1
LEXINGTON, KY 40550-0999

EXAMINER
TSAI, TSUNG YIN

ART UNIT	PAPER NUMBER
2624	

MAIL DATE	DELIVERY MODE
08/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/754,123	BAILEY, JAMES R.
	Examiner	Art Unit	
	Tsung-Yin Tsai	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>26 April 2007</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-32</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-32</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>09 January 2004</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAIL ACTION

Acknowledgment of the amendment received on 4/16/2007 and made of recorded.

Acknowledgment of the amendment regarding the proper relocation of the claim

heading to its own page.

Acknowledgment of the amendment regarding claim objection.

Acknowledgment of the amendment regarding amendment to claims.

Response to Arguments

Applicant's argument – amend the claim objections as requested by the

examiner.

Examiner's response – examiner note the changes and withdraw objections.

Applicant's argument - Examiner's position, neither suggests nor discloses a

tag generated from a scan. Further, Denber certainly does not suggest generating a tag

containing information representing the result of the defect detection for each section of

the image scanning area having the detected defect

Examiner's response – Examiner holds his rejection with additional note.

Denber teaches in abstract that the platen is first scan and an electronic image is

generated and stored which contain information **on the location of the dirt spot or**

inherent defect such as etch marks. This suggests that the "dirt spot" is tagged with

information such as location and even compare to see if such markings that are

detected are seen as image analysis on the detected spot.

Further step, taught by Denber, includes determine whether the spot lies wholly or

partially with in any information area of the document image. This not only related about

tagging the dirt spot regarding with information, but how it should be deal with as shown

by figure 8A-8D. Column 1 lines 65-67 disclose that information content is form from the

scan.

Applicant's argument - Further, applicant's amended Claims 1 and 14 are

nonobvious over Denber. Denber is a **simple apparatus** and method **unconcerned**

with intelligently detecting and compensating for physical defects without the

user's knowledge, unlike applicant's invention. Thus, a person of ordinary skill in the

art would not consider modifying Denber to create applicant's claimed invention.

Accordingly, reconsideration and withdrawal of the rejection to independent Claims 1

and 14 are requested.

Examiner's response - Examiner holds his rejection with additional note.

Denber teaches in abstract that the platen is first scan and an electronic image is

generated and stored which contain information on the location **of the dirt spot or**

inherent defect such as etch marks. This suggests that the "dirt spot" is tagged with

information such as location and even compare to see if such markings that are

detected are inherent suggesting image analysis on the detected spot. Column 4 lines

55-67 disclose where the image processor is able to carry out to identify an etch **mark**

by looking for characteristic "noise" pattern. The system further alerts the user of the defect and request cleaning of the platen. Functions such information generated for the dirt spot location, detection of inherent defect, image analysis on the characteristic noise patter and alerting user shows that the system is intelligent in detecting as well as compensating for physical defects with the user's knowledge.

Applicant's argument - Peairs does not disclose generating tags containing information representing the result of the defect detection for each section of the image scanning area having the detected defect, as required by amended Claims 1 and 14.

Examiner's response – Examiner holds his rejection. Denber combine with teaching of Peairs taught regarding limitation set by claims 2-4, 10-11, 15-17, 23-24 and 31. As discussed above Denber does disclose teaching regarding generating information and image analysis for detect abnormalities on the platen of the scan system as claimed in claims 1 and 14.

Applicant's argument - Xu does not disclose generating tags containing information representing the result of the defect detection for each section of the image scanning area having the detected defect, as required by Claims 1 and 14.

Examiner's response - Examiner holds his rejection. Denber combine with teaching of Xu taught regarding limitation set by claims 13 and 26. As discussed above Denber does disclose teaching regarding generating information and image analysis for detect abnormalities on the platen of the scan system as claimed in claims 1 and 14.

Claim Rejections – 35 USC 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1, 5-6, 7-9, 12, 14, 18-22, 25, 27, 29-30 and 32 are rejected under 35

U.S.C. 102(b) as being unpatentable over Denber (US Patent Number 5,214,470).

Denber discloses the following method and apparatus (figure 1, column 2 lines 40-67):

(1) Regarding claims 1 and 14:

performing a defect calibration scan of an image scanning area (figure 2,

column 1 lines 30-67. Scan is done with out the document in place. This is the

defect calibration scan.);

analyzing data produced from the defect calibration scan to detect at least

one defect in at least one section of the image scanning area (figure 2, column 1

lines 30-67. Creation of black and white bitmap is the result of the analysis.); and

generating a tag containing information representing the result of the defect

detection for each section of the image scanning area having a detected defect

(figure 2, column 1 lines 30-67, column 2 lines 1-10 discloses bitmap creation

with the black and white pixel are creation of the tags. Location determination is

also the tag creation. Denber teaches in abstract that the platen is first scan and

an electronic image is generated and stored which contain information **on the location of the dirt spot or inherent defect** such as etch marks. This suggests that the "dirt spot" is tagged with information such as location and even compare to see if such markings that are detected are see as image analysis on the detected spot. Further step, taught by Denber, includes determine whether the spot lies wholly or partially with in any information area of the document image. This not only related about tagging the dirt spot regarding with information, but how it should be deal with as shown by figure 8A-8D. Column 1 lines 65-67 disclose that information content is form from the scan.).

(2) Regarding claims 5 and 18:

further comprising automatically compensating for the defect based on information contained within the tag (figure 8a-8d, figure 7, figure 9, column 3 and 4. The spiral region technique is the method that take the given information and corrects it.).

(3) Regarding claims 6 and 19:

further comprising determining the nature of the defect by recursively dividing the section of the image scanning area tagged as having a defect into subareas and analysis each subarea in detail (figure 8a-8d, figure 7, figure 9, column 4 lines 1-10. The figures show that the defect in the area is divided. Pixel , which are the smallest division of the image, are than analysis one by one.).

(4) Regarding claims 7 and 20:

further comprising determining whether the section of the image scanning

area tagged as having a defect is included in a target image region (figure 2,

figure 5, figure 6, column 2 lines 1-10, column 3 lines 35-45.).

(5) Regarding claims 8 and 21:

further comprising ignoring the section of the image scanning area tagged

as having a defect if that section is determined not to be included in the target

image region (figure 2, figure 5, figure 6, column 2 lines 1-10, column 3 lines 55-

65).

(6) Regarding claims 9 and 22:

wherein the section of the image scanning area tagged as having a defect

is ignored in autofitting the target image to the image scanning area (figure 2,

figure 5, figure 6, column 2 lines 1-10, column 3 lines 55-65).

(7) Regarding claims 12 and 25:

further comprising smoothing over the section of the image scanning area

tagged as having a defect if that section is determined to be included in the target

image region (figure 2, figure 5, figure 6, column 2 lines 1-10, columns 3-4).

(8) Regarding claim 27:

wherein the analyzer and the tag generator are included in the image

scanning device (column 3 lines 40-67 to column 4 lines 1-25).

(9) Regarding claim 29:

wherein the compensator is included in the image scanning device

(column 3 lines 40-67 to column 4 lines 1-25, figure 8a-8d, figure 7, figure 9,

column 3 and 4. The technique is the compensator).

(10) Regarding claim 32:

wherein the compensator is included in a host computer connected to the

image scanning device (column 3 lines 40-67 to column 4 lines 1-25, figure 8a-

8d, figure 7, figure 9, column 3 and 4. The compensator is within the hardware.).

(11) Regarding claim 30:

wherein at least one of the analyzer and the tag generator are included in

a host computer connected to the image scanning device (column 3 lines 40-67

to column 4 lines 1-25, figure 8a-8d, figure 7, figure 9, column 3 and 4. All of the

hardware are within the host processor.).

Claim Rejections – 35 USC 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 2-4, 10-11, 15-17, 23-24, 28 and 31 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Denber (US Patent Number 5,214,470) in view of Peairs et

al (US Patent Number 5,694,228).

Denber discloses all that is above except the following:

(1) Regarding claims 2 and 15:

wherein the defect calibration scan data is performed on the occurrence of at least one of the group of events comprising when the image scanning device is powered up upon request by a user, and periodically.

Peairs et al in the same field of endeavor disclose wherein the defect calibration scan data is performed on the occurrence of at least one of the group of events comprising when the image scanning device is powered up upon request by a user, and periodically (figure 1, figure 2, column 2 lines 5-20, column 3 lines 45-55).

It would have been obvious to one skill in the art at the time of the invention to employ Peairs et al teaching to Denber to scan the defect calibration scan data is performed on the occurrence of at least one of the group of events comprising when the image scanning device is powered up upon request by a user, and periodically. Such that tags database would be readily up-to-date and would be ready to be use any time that is requested.

(2) Regarding claims 3 and 16:

further comprising storing the tag.

Peairs et al in the same field of endeavor disclose further comprising storing the tag (figure 1, figure 2, column 2 lines 5-15, column 2 lines 35-40, column 4 table 1, figure 7, figure 9.).

It would have been obvious to one skill in the art at the time of the invention to employ Peairs et al teaching to Denber to further comprising storing the tag. Such that the detection will know the location and tags database would be readily up-to-date and would be ready to be use any time that is requested.

(3) Regarding claims 4 and 17:

further comprising repeating the steps of performing the defect calibration scanning, analyzing defect calibration scan data to detect for a new defect and a change in any previously detected defect, generating and storing a tag for each new detected defect, and updating the stored tag for each previously detected defect that has changed.

Peairs et al in the same field of endeavor disclose further comprising repeating the steps of performing the defect calibration scanning, analyzing defect calibration scan data to detect for a new defect and a change in any previously detected defect, generating and storing a tag for each new detected defect, and updating the stored tag for each previously detected defect that has changed (figure 1, figure 2, column 2 lines 10-20, column 3 lines 45-55. New defects are noted and their location and values are store and update to the tag database.).

It would have been obvious to one skill in the art at the time of the invention to employ Peairs et al teaching to Denber further comprising repeating the steps of performing the defect calibration scanning, analyzing defect calibration scan data to detect for a new defect and a change in any previously

detected defect, generating and storing a tag for each new detected defect, and updating the stored tag for each previously detected defect that has change. Such that tags database would be readily up-to-date and would be ready to be use any time that is requested.

(4) Regarding claims 10 and 23:

wherein the section of the image scanning area tagged as having a defect is ignored in cloning the target image to produce multiple target images over the image scanning area.

Peairs et al in the same field of endeavor disclose wherein the section of the image scanning area tagged as having a defect is ignored in cloning the target image to produce multiple target images over the image scanning area (figure 1, figure 2, column 3 lines50-67 to column 4 lines 1-2. Office copier is the "cloner" that will output the multi image ignoring the defect area.).

It would have been obvious to one skill in the art at the time of the invention to employ Peairs et al teaching to Denber wherein the section of the image scanning area tagged as having a defect is ignored in cloning the target image to produce multiple target images over the image scanning area. Such would be the efficiency and faster way of making copies of the target image.

(5) Regarding claims 11 and 24:

wherein the section of the image scanning area tagged is having a defect is ignored in enlarging the target image to fit across multiple image scanning areas.

Peairs et al in the same field of endeavor disclose wherein the section of the image scanning area tagged is having a defect is ignored in enlarging the target image to fit across multiple image scanning areas (figure 1, figure 2, column 3 lines50-67 to column 4 lines 1-2. Copier not only have the ability to copy, but also edit and change the image, in this case enlarging or blow up the image from original size.).

It would have been obvious to one skill in the art at the time of the invention to employ Peairs et al teaching to Denber wherein the section of the image scanning area tagged is having a defect is ignored in enlarging the target image to fit across multiple image scanning areas. Such would be a cumulative feature for the user who would want the flexibility and adaptability from one machine.

(6) Regarding claim 28:

wherein the memory is included in the image scanning device.

Peairs et al in the same field of endeavor disclose wherein the memory is included in the image scanning device (figure 1, figure 2).

It would have been obvious to one skill in the art at the time of the invention to employ Peairs et al teaching to Denber wherein the memory is included in the image scanning device. Such that the design would be cumulative feature and such feature of including memory within would make the process faster.

(7) Regarding claim 31:

wherein the memory is included in a host computer connected to the

image scanning device.

Peairs et al in the same field of endeavor disclose wherein the memory is

included in a host computer connected to the image scanning device (figure 1,

figure 2).

It would have been obvious to one skill in the art at the time of the

invention to employ Peairs et al teaching to Denber wherein the memory is

included in a host computer connected to the image scanning device. Such that

the design would be cumulative feature and such feature of including memory

within would make the process faster.

5.   Claims 13 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Denber (US Patent Number 5,214,470) in view of Xu et al (US Patent Number

5,761,336).

Denber discloses all that is above except the following:

(1) Regarding claims 13 and 26:

wherein the defect calibration scan is a low resolution.

Xu et al in the same field of endeavor disclose wherein the defect

calibration scan is a low resolution (figure 1, column 4 lines 10-42, column 5 lines

65-67 to column 6 lines 1-10.)

It would have been obvious to one skill in the art at the time of the

invention to employ Xu et al teaching to Denber wherein the defect calibration

scan is a low resolution. Such the defect calibration scan will a quick update for

the tag database and low resolution scanning would increase depth of focus

providing superior defect detection and classification.

Conclusion

6.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

7.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Gauthier (US Patent Number 6,122,065) disclose apparatus and method for

detecting surface defects.

Kinjo (USPG_PUB 2002/0015514 A1) disclose Image processing method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tsung-Yin Tsai whose telephone number is (571) 270-1671. The examiner can normally be reached on Monday - Friday 8 am - 5 pm ESP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571)272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tsung-Yin Tsai
June 2, 2007

JINGGE WU
SUPERVISORY PATENT EXAMINER